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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/706,643

11/12/2003

Timothy Patrick Kelliher

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GENERAL ELECTRIC COMPANY  
GLOBAL RESEARCH  
PATENT DOCKET RM. BLDG. K1-4A59  
NISKAYUNA, NY 12309

EXAMINER

HAYLES, ASHFORD S

ART UNIT

PAPER NUMBER

3687

NOTIFICATION DATE

DELIVERY MODE

10/27/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/706,643	<b>Applicant(s)</b> KELLIHER ET AL.	
	<b>Examiner</b> Ashford S. Hayles	<b>Art Unit</b> 3687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Amendment received on August 21, 2008 has been acknowledged. Applicant's amendments have been entered. Therefore, claims 1-12 are pending.

#### ***Response to Amendment***

2. Applicant's amendments are sufficient to overcome previous 35 USC 101 rejection set forth in the previous office action.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otto et al. (PG PUB. 20020113123) in view of Sorensen (PG PUB. 20020178085).**

**As per Claim 1**, Otto et al. discloses a monitoring system comprising:

a tracking mechanism for tracking a shopper (§ [0083] discusses the location of the basket within the market can be inferred from stationary RFID devices) and merchandise as said shopper is shopping and for generating a list of currently acquired items (§ [0035] discusses maintaining a continual inventory of the contents of the basket).

a processor for comparing said list of currently acquired items to a list of previous items generated and for providing any discrepancies (§ [0080] discusses an inventory taken at a given time is compared with the last previous inventory. If a comparison of

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the inventories indicates an item present in one inventory, and absent in another, a suitable inference is drawn).

However, Otto et al. fails to disclose a list of purchased items generated at a point of sale.

Sorensen teaches a Point-of-sale (POS) terminals and a purchase record computer, where the POS terminal is configured to identify and record purchased products, thereby generating a purchase record for each shopper to have a final checkout location.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the automated monitoring of activity of a shopper in a market of Otto et al. to include the purchase recording system at a point of sale as taught by Sorensen in order to determining a shopping behavior of a shopper at a final checkout location (As disclosed in ¶ [0010]).

**As per Claim 2**, Otto et al. discloses the system according to claim 1, where said tracking mechanism comprises:

an object tracking component to track said merchandise (Figure 2, Item 6, RFID 19) ;

a shopper tracking component to track said shopper (¶ [0083] discusses the location of the basket within the market can be inferred from stationary RFID devices);  
and

a behavior recognition component to analyze tracking information from said object tracking component and said shopper tracking component to determine acquisition events (Table 1 and Table 2).

**As per Claim 3**, Otto et al. discloses the system according to claim 1, further comprising:

a storage device for storing said list of currently acquired items (Figure 2, Scanner device 15).

**As per Claim 4**, Otto et al. discloses the system according to claim 3, wherein said storage device also stores a history (Figure 2, Scanner device 15).

**As per Claim 5**, Otto et al. discloses a monitoring method comprising:

analyzing the location information and the behavior information to generate a list of acquired items (Table 1 and Table 2);

comparing said list of previous items to said list of purchased items(¶ [0080] discusses an inventory taken at a given time is compared with the last previous inventory) by a processor for providing any discrepancies between said list of acquired items and said list of purchased items(¶ [0080] discusses a comparison of the inventories indicates an item present in one inventory, and absent in another, a suitable inference is drawn).

However, Otto et al. fails to disclose providing location information and behavior information about a shopper as said shopper is shopping and generating a list of purchased items at a point of sale.

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Sorensen teaches tracking a shopper's path through a shopping environment; detecting that the shopping path is within a predefined region relative to a product; and determining a shopping behavior of a shopper within the predefined region (pg.1, ¶ [0007]). Sorensen further teaches a Point-of-sale (POS) terminals and a purchase record computer, where the POS terminal is configured to identify and record purchased products, thereby generating a purchase record for each shopper.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the automated monitoring of activity of a shopper in a market of Otto et al. to include the recording of listed purchased items at a point of sale as taught by Sorensen in order to determining a shopping behavior of a shopper at a final checkout location (As disclosed in ¶ [0010]).

**As per Claim 6**, Otto et al. discloses the method according to claim 5, further comprising:

comparing said list of acquired items and said location information having known merchandise locations and providing any discrepancies (Table 1 and Table 2).

**As per Claim 7**, Otto et al. discloses the method according to claim 5, further comprising:

gathering said location information and said behavior information about said shopper (¶ [0028] discusses the very short time duration during which the location of the can of corn was unknown, namely, ten seconds, raises the inference that the customer removed the can from the shelf, and directly placed it into the basket 12. This customer probably did not spend any time in making a decision over the purchase).

**As per Claim 8**, Otto et al. discloses the method according to claim 5, further comprising:

storing a history of location information (Table 1), behavior information (§ [0032] discusses gather information upon which the inferences are based), and acquired items (§ [0035] Contents List).

**As per Claim 9**, Otto et al. discloses a computer readable medium having instructions for performing a monitoring method, said method comprising:

gathering tracking information about at least one shopper substantially continuously from a point of entry into a shop (§ [0083] discusses the location of the basket within the market can be inferred from stationary RFID devices);

generating a list of current items for said shopper (§ [0035] discusses maintaining a continual inventory of the contents of the basket);

comparing said list of current items and said list of previous items and providing any discrepancies (§ [0080] discusses an inventory taken at a given time is compared with the last previous inventory and a comparison of the inventories indicates an item present in one inventory, and absent in another, a suitable inference is drawn).

However, Otto et al. fails to disclose scanning at a point of sale to generate a list of purchased items for said at least one shopper.

Sorensen teaches a Point-of-sale (POS) terminals and a purchase record computer, where the POS terminal is configured to identify and record purchased products, thereby generating a purchase record for each shopper.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the automated monitoring of activity of a shopper in a market of Otto et al. to include the purchase recording system at a point of sale as taught by Sorensen in order to determining a shopping behavior of a shopper (As disclosed in ¶ [0010]).

**As per Claim 10**, Otto et al. discloses the computer readable medium according to claim 9, further comprising:

storing a history for said at least one shopper (¶ [0045] discusses historical purchasing data can be examined, and the total purchases of a large number of customers are examined).

**As per Claim 11**, Otto et al. The computer readable medium according to claim 9, as indicated supra.

Otto et al. fails to disclose gathering information about said at least one shopper over a plurality of shopping trips.

Sorensen teaches a data analyzer is configured to impute or predict a path in the same or a different shopping environment for a particular shopper based at least in part on the historic shopper path data from prior shopping trips linked to the frequent shopping or discount card.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the automated monitoring of activity of a shopper in a market of Otto et al. to include the historic shopping history of a shopper as taught by Sorensen in order to determining a shopping behavior of a shopper (As disclosed in ¶ [0010]).



**As per Claim 12**, Otto et al. discloses the computer readable medium according to claim 9, wherein generating said list of acquired items for said shopper is performed by analyzing said tracking information to recognize acquisition events (Table 2).

### ***Response to Arguments***

5. Applicant's arguments filed on August 21, 2008 have been fully considered but they are not persuasive.

Applicant argues: “ *Otto only compares inventories in a shopping basket at different times. In Otto, two scanners (15 and 55, FIG. 4, Otto), both of which are associated to the shopping basket, draw the inferences. The inferences are drawn by comparing a current inventory in a shopping basket to a previous inventory in the same shopping basket. This does not teach or suggest that a current inventory is purchased. Both the current and the previous inventory are concerning the items in the shopping basket at different times while shopping. There is no teaching or suggestion about any comparison with purchased items. In Sorensen, the generated purchase records are sent to data analyzer (paragraph 0033, Sorensen). Sorensen does not teach or suggest about any analysis of data that involves comparison of currently acquired items to a list of purchased items*”.

Examiner respectfully disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Therefore the ability to compare an inventory taken at a given time compared with the last previous inventory acquired by a shopper during a shopping visit as taught by Otto combined with the purchase record as taught by Sorenson would result in the applicants claimed limitation. Otto also discloses if a comparison of the inventories indicates an item present in one inventory, and absent in another, a suitable inference is drawn (pg.5, ¶ [0080]), where the data is analyzed and an inference is determined when a shopper selects items for purchase, and delivers them at a check-out station and the scanner can poll the RFIDs present in a shopping basket as a group (pg.1, ¶ [0003-0004]).

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashford S. Hayles whose telephone number is 571-270-5106. The examiner can normally be reached on Monday thru Thursday 8:30 to 4:00 Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Gart can be reached on (571) 272-3955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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